

Piedmont Regional Office
MAR 28 2013
RECEIVED

LAND APPLICATION SITE
CHARLES E GREGORY SITE
DWCEG 1-7
DINWIDDIE COUNTY

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 11-4-12 between CHARLES GREGORY referred to here as "Landowner", and Recyc Systems, Inc, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in Dinwiddie, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

Table 1.: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges

| Tax Parcel ID | Tax Parcel ID | Tax Parcel ID | Tax Parcel ID |
|---------------|---------------|---------------|---------------|
| Tm 25-4, P12 | | | |
| Tm 25-4, P13 | | | |
| Tm 25-4, P14 | | | |
| | | | |
| | | | |

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☐ The Landowner is the sole owner of the properties identified herein.
☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and
2. Notify the Permittee of the sale within two weeks following property transfer.

The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.

The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

| | | | |
|---|---|---|---|
| <u>Class B biosolids</u> | <u>Water treatment residuals</u> | <u>Food processing waste</u> | <u>Other industrial sludges</u> |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

804 731 4327

CHARLES GREGORY
Landowner - Printed Name, Title

Charles Gregory
Signature

8881 Hobbs Mill Rd Wilson Va 23894
Mailing Address & Phone Number

Permittee:

Recyc Systems, Inc, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)

[Signature]
Permittee - Authorized Representative
Printed Name

Signature

PO Box 562 Remington, Virginia 22734
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Recyc Systems, Inc

County or City: DINWIDDIE

Landowner: CHARLES GREGORY

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.
2. Public Access
 - a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
 - b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
 - c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.
3. Crop Restrictions:
 - a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
 - b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
 - c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
 - d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
 - e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).
4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

 - a. Meat producing livestock shall not be grazed for 30 days.
 - b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
 - c. Other animals shall be restricted from grazing for 30 days;
5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Charles Gregory
Landowner's Signature

NOV 14 2012
Date

Charles Gregory
Farm Operator Signature

8881 Hobbs Mill Rd
Wilson Va 23894
Mailing Address & Phone Number

804 731 4327

**VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS**

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

A. This land application agreement is made on 11-4-12 between KATE GREGORY referred to here as "Landowner", and Recyc Systems, Inc, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.

Landowner:

The Landowner is the owner of record of the real property located in DINWIDDIE, Virginia, which includes the agricultural, silvicultural or reclamation sites identified below in Table 1 and identified on the tax map(s) attached as Exhibit A.

| Table 1: Parcels authorized to receive biosolids, water treatment residuals or other industrial sludges | | | |
|---|---------------|---------------|---------------|
| Tax Parcel ID | Tax Parcel ID | Tax Parcel ID | Tax Parcel ID |
| <u>Tm 25-4, P12</u> | | | |
| <u>Tm 25-4, P13</u> | | | |
| <u>Tm 25-4, P14</u> | | | |
| | | | |
| | | | |

☐ Additional parcels containing Land Application Sites are identified on Supplement A (check if applicable)

Check one:

- ☐ The Landowner is the sole owner of the properties identified herein.
☒ The Landowner is one of multiple owners of the properties identified herein.

In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall:

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The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application.

| | | | |
|---|---|---|---|
| <u>Class B biosolids</u> | <u>Water treatment residuals</u> | <u>Food processing waste</u> | <u>Other industrial sludges</u> |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

KATE Gregory
Landowner - Printed Name, Title

Kate Gregory
Signature

8881 Hobbs Mill Rd
Mailing Address & Phone Number
Wilson, VA 23894
804.731.4321

Permittee:

Recyc Systems, Inc, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.

The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.

☐ I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement.)

[Signature]
Permittee - Authorized Representative
Printed Name

[Signature]
Signature

PO Box 562 Remington, Virginia 22734
Mailing Address

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION: PART D-VI LAND APPLICATION AGREEMENT

Permittee: Recyc Systems, Inc

County or City: DINWIDDIE

Landowner: KATE GREGORY

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

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6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Kate Gregory
Landowner's Signature

Nov 4, 2012
Date

Kate Gregory
Farm Operator Signature

8881 Jobbs Mill Rd.
Wilsons, Va. 23894
Mailing Address & Phone Number

204-731-4325

Landowner Coordination Form

This form is used by the Permittee to identify properties (tax parcels) that are authorized to receive biosolids and/or industrial residuals, and each of the legal landowners of those tax parcels. A Land Application Agreement-Biosolids and Industrial Residuals from original signature must be attached for each legal landowner identified below prior to land application at the identified parcels.

Permittee: RECYC SYSTEMS, INC.Site Name: CHARLES E. GREGORYCounty or City: DINWIDDIE

Please Print

Signature not required on this page

| <u>Tax Parcel ID(s)</u> | <u>Landowners (s)</u> |
|-------------------------|------------------------------|
| TM25-4, P12,13,14 | Charles E. & Kate B. Gregory |
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FARM DATA SHEET

| | | | |
|---------------------------|---|------------------------------|---|
| SITE NAME: | Charles E. Gregory | COUNTY: | Dinwiddie |
| OWNER: | Charles E. & Katherine B. Gregory | OPERATOR: | Charles E. Gregory |
| OWNER'S ADDRESS: | 8881 Hobbs Mill Road Wilsons, VA 23894 | OPERATOR'S ADDRESS: | 8881 Hobbs Mill Road Wilsons, VA 23894 |
| OWNER'S TELEPHONE: | 804-731-4327 | OPERATOR'S TELEPHONE: | 804-731-4327 |
| GENERAL FARM TYPE: | Hay/Pasture | CELLPHONE: | |
| # CATTLE: | 40 | EMAIL: | |
| LAGOON or SLURRY: | None | LATITUDE: | 37°09'03" |
| TOPO QUAD: | Hebron | LONGITUDE: | 77°50'40" |
| COMMENTS: | | | |
| | | | |
| | | | |
| | | | |
| | | | |

RECYC SYSTEMS, INC

FIELD DATA SHEET

| Field Identification | Gross Acres | Environmentally Sensitive Soils | | | | Hydro Map | Tax Map # | FSA Tract # |
|-------------------------|----------------|---------------------------------|---------------------|------------|------------|--------------|---------------|--------------------------|
| | | Water Table | Bed Rock/Shallow | Surf/Leach | Freq Flood | | | |
| DWCEG 1 | 13.1 | - | - | - | - | JA37 | TM25-4,P12,13 | T5644B Field 0 |
| DWCEG 2 | 11.7 | - | - | - | - | JA37 | TM25-4,P14 | T5644 Fields 6,8 |
| DWCEG 3 | 5.2 | - | - | - | - | JA37 | TM25-4,P14 | T5644 Fields 4,17 |
| DWCEG 4 | 8.8 | - | - | - | - | JA37 | TM25-4,P14 | T5644 Field 5 |
| DWCEG 5 | 15.5 | - | - | - | - | JA37 | TM25-4,P14 | T5644 Fields 20,23 |
| DWCEG 6 | 21.3 | - | - | - | - | JA37 | TM25-4,P14 | T5644 Fields 1,2,3,15 |
| DWCEG 7 | 12.9 | - | - | - | - | JA37 | TM25-4,P14 | T5644 Field 16 |
| | | | | | | | | |
| | | | | | | | | |
| TOTAL ACRES IN SITE | 88.5 | | | | | | | |

Report Number: 12-310-0659

Account Number: 70594

Rate



www.aleastern.com

A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC
SUSAN TRUMBO
8455 WHITESHOP RD
CULPEPER VA 22701

Grower:
GREGORY
DINWIDDIE

Submitted By: J.B. CRENSHAW
Farm ID:

SOIL ANALYSIS REPORT

Analytical Method(s):
Mehlich 3

Date Received: 11/05/2012

Date Of Analysis: 11/06/2012

Date Of Report: 11/07/2012

| Sample ID Field ID | Lab Number | Organic Matter | | | Phosphorus | | | Potassium | | Magnesium | | Calcium | | Sodium | | pH | | Acidity | C.E.C |
|-----------------------|---------------|----------------|------|--------------|----------------------|-----------------|-----|-----------|------|-----------|------|-----------|------|-----------|------|------------|-----------------|---------------|----------|
| | | % | Rate | ENR Sps/A | Mehlich 3 ppm Rat | Reserve Rate | ppm | K ppm | Rate | Mg ppm | Rate | Ca ppm | Rate | Na ppm | Rate | Soil pH | Buffer Index | H meq/100g | meq/100g |
| DWCEG 1 | 18043 | 1.7 | L 7 | 78 | 59 H | H | | 37 | VL | 88 | H | 527 | M | | | 6.2 | 6.88 | 0.5 | 3.9 |
| DWCEG 2 | 18044 | 1.8 | L 8 | 81 | 33 M | M | | 126 | H | 78 | H | 415 | M | | | 6.2 | 6.89 | 0.4 | 3.5 |
| DWCEG 3 | 18045 | 2.9 | M 10 | 100 | 28 L | L | | 110 | M | 99 | H | 696 | M | | | 6.1 | 6.86 | 0.7 | 5.3 |
| DWCEG 4 | 18046 | 2.6 | M 9 | 96 | 91 H | H | | 60 | L | 95 | H | 564 | M | | | 5.9 | 6.85 | 0.8 | 4.5 |
| DWCEG 5 | 18047 | 3.1 | M 10 | 107 | 59 H | H | | 226 | VH | 97 | H | 328 | L | | | 6.2 | 6.89 | 0.4 | 3.4 |

| Sample ID Field ID | Percent Base Saturation | | | | | Nitrate | Sulfur | Zinc | Manganese | Iron | Copper | Boron | Soluble Salts | Chloride | Aluminum |
|-----------------------|-------------------------|---------|---------|---------|--------|-------------------------------|---------------|----------------|----------------|----------------|----------------|---------------|------------------|----------------|-----------|
| | K % | Mg % | Ca % | Na % | H % | NO ₃ N ppm Rate | S ppm Rate | Zn ppm Rate | Mn ppm Rate | Fe ppm Rate | Cu ppm Rate | B ppm Rate | SS ms/cm Rate | Cl ppm Rate | Al ppm |
| DWCEG 1 | 2.4 | 18.8 | 67.6 | | 12.3 | | | | | | | | | | |
| DWCEG 2 | 9.2 | 18.6 | 59.3 | | 12.0 | | | | | | | | | | |
| DWCEG 3 | 5.3 | 15.6 | 65.7 | | 13.8 | | | | | | | | | | |
| DWCEG 4 | 3.4 | 17.6 | 62.7 | | 17.3 | | | | | | | | | | |
| DWCEG 5 | 17.0 | 23.8 | 48.2 | | 12.3 | | | | | | | | | | |

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by: A&L Eastern Laboratories, Inc.

by: *Paucic McGeary*

Paucic McGeary

Report Number: 12-310-0659

Account Number: 70594



www.aleastern.com

A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC
SUSAN TRUMBO
8455 WHITESHOP RD
CULPEPER VA 22701

Grower:
GREGORY
DINWIDDIE

Submitted By: J.B. CRENSHAW
Farm ID:

Date Received: 11/05/2012

Date Of Report: 11/07/2012

SOIL FERTILITY RECOMMENDATIONS

| Sample ID Field ID | Intended Crop | Yield Goal | Lime Tons/A | Nitrogen N lb/A | Phosphate P ₂ O ₅ lb/A | Potash K ₂ O lb/A | Magnesium Mg lb/A | Sulfur S lb/A | Zinc Zn lb/A | Manganese Mn lb/A | Iron Fe lb/A | Copper Cu lb/A | Boron B lb/A |
|-----------------------|------------------|------------|----------------|-----------------------|--|------------------------------------|-------------------------|---------------------|--------------------|-------------------------|--------------------|----------------------|--------------------|
| DWCEG 1 | Adjust pH to 6.8 | 0 | 13 | | | | 0 | | | | | | |
| DWCEG 2 | Adjust pH to 6.8 | 0 | 13 | | | | 2 | | | | | | |
| DWCEG 3 | Adjust pH to 6.8 | 0 | 13 | | | | 0 | | | | | | |
| DWCEG 4 | Adjust pH to 6.8 | 0 | 15 | | | | 0 | | | | | | |
| DWCEG 5 | Adjust pH to 6.8 | 0 | 13 | | | | 0 | | | | | | |

Comments:

Sample(s) : DWCEG 2 Crop: Adjust pH to 6.8

If dolomitic lime is not used, apply required magnesium with magnesium oxide. Epsom Salts, K-Mag or Sul-PO-Mag.

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

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Paucic McGeary

Paucic McGroary

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A&L Eastern Laboratories

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To: RECYC SYSTEMS INC
SUSAN TRUMBO
8455 WHITESHOP RD
CULPEPER VA 22701

Grower:
GREGORY
DINWIDDIE

Submitted By: J.B. CRENSHAW
Farm ID:

SOIL ANALYSIS REPORT

Analytical Method(s):

Mehlich 3

Date Received: 11/05/2012

Date Of Analysis: 11/06/2012

Date Of Report: 11/07/2012

| Sample ID Field ID | Lab Number | Organic Matter | | | Phosphorus | | | | Potassium | | Magnesium | | Calcium | | Sodium | | pH | | Acidity | C.E.C |
|-----------------------|---------------|----------------|------|--------------|------------------|------|----------------|------|-----------|------|-----------|------|-----------|------|-----------|------|------------|-----------------|---------------|----------|
| | | % | Rate | ENR lbs/A | Mehlich 3 ppm | Rate | Reserve ppm | Rate | K ppm | Rate | Mg ppm | Rate | Ca ppm | Rate | Na ppm | Rate | Soil pH | Buffer Index | H meq/100g | meq/100g |
| DWCEG 6 | 18046 | 1.8 | L 8 | 81 | 37 | M | | | 77 | M | 88 | H | 372 | M | | | 5.9 | 6.87 | 0.6 | 3.4 |
| DWCEG 7 | 18049 | 1.9 | L 8 | 85 | 19 | L | | | 114 | H | 48 | H | 235 | L | | | 5.6 | 6.87 | 0.6 | 2.4 |

| Sample ID Field ID | Percent Base Saturation | | | | | Nitrate | Sulfur | Zinc | Manganese | Iron | Copper | Boron | Soluble Salts | Chloride | Aluminum |
|-----------------------|-------------------------|---------|---------|---------|--------|--------------------------|----------|-----------|-----------|-----------|-----------|----------|---------------|-----------|-----------|
| | K % | Mg % | Ca % | Na % | H % | NO ₃ N ppm | S ppm | Zn ppm | Mn ppm | Fe ppm | Cu ppm | B ppm | SS ms/cm | Cl ppm | Al ppm |
| DWCEG 6 | 5.8 | 21.6 | 54.7 | | 17.0 | | | | | | | | | | |
| DWCEG 7 | 12.2 | 16.7 | 49.0 | | 23.7 | | | | | | | | | | |

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High). ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams). Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

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Analysis prepared by: A&L Eastern Laboratories, Inc.

by: *Paucic McGroary*

Paucic McGroary

Report Number: 12-310-0659

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Grower:
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Farm ID:

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|-----------------------|------------------|------------|----------------|-----------------------|--|------------------------------------|-------------------------|---------------------|--------------------|-------------------------|--------------------|----------------------|--------------------|
| DWCEG 6 | Adjust pH to 6.8 | 0 | 1.5 | | | | 0 | | | | | | |
| DWCEG 7 | Adjust pH to 6.8 | 0 | 1.8 | | | | 32 | | | | | | |

Comments:

Sample(s) : DWCEG 7 Crop: Adjust pH to 6.8

If dolomitic lime is not used, apply required magnesium with magnesium oxide. Epsom Salts, K-Mag or Sul-PO-Mag.

"The recommendations are based on research data and experience, but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made."

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Pauric McGroary

THE PLANNER IS NOT STATE CERTIFIED

Nutrient Management Plan Balance Sheet
(Spring, 2013-Summer, 2014)
Charles E. Gregory
Planner: Recyc Systems, Inc.

Tract: 5644 Location: Dinwiddie
(N = N based, 1P = P based, 1.5P = P based at 1.5 removal, 0P = No P allowed)

| Field CFSA No. /Name | Size (ac) Total/ Used | Yr. | Crop | Needs N-P-K (lbs/ac) | Leg /Man Resid | Manure/Biosid Rate & Type (season) | IT (d) | Man/Bios N-P-K (lbs/ac) | Net = Needs - appld N-P-K (lbs/ac) | Sum P rem cred | Commercial N-P-K (lbs/ac) | Notes | |
|----------------------------|--------------------------------|------|-------------------------|----------------------------|----------------------|--|-----------|-------------------------------|--|-------------------------|---------------------------------|-------|--|
| 0/DWCEG 1(N) | 13/13 | 2013 | Fescue grass hay mt. | 70-40-130 | 0/0 | | | | 70-40-130 | N/A | | | |
| 6,8/DWCEG 2(N) | 12/12 | 2013 | Grass Pasture | 50-80-0 | 0/0 | | | | 50-80-0 | N/A | | | |
| 4,17/DWCEG 3(N) | 5/5 | 2013 | Fescue grass hay mt. | 90-90-160 | 0/0 | | | | 90-90-160 | N/A | | | |
| 5/DWCEG 4(N) | 9/9 | 2013 | Fescue grass hay mt. | 90-50-185 | 0/0 | | | | 90-50-185 | N/A | | | |
| 20,23/DWCEG 5(N) | 16/16 | 2013 | Fescue grass hay mt. | 70-40-0 | 0/0 | | | | 70-40-0 | N/A | | | |
| 1,2,3,15/DWCEG 6(N) | 21/21 | 2013 | Grass Pasture | 50-80-80 | 0/0 | | | | 50-80-80 | N/A | | | |
| 16/DWCEG 7(N) | 13/13 | 2013 | Fescue grass hay mt. | 70-70-85 | 0/0 | | | | 70-70-85 | N/A | | | |

Commercial Application Methods:

br - Broadcast ba - Banded sd - Sidedress

Notes:

Soil Test Summary

| Tract | Field | Acre | Date | P205 | K20 | Lab | Soil pH | Lime Date | rec. lime tons/Ac |
|-------|---------|------|---------|---------------|-----------------|----------|------------|--------------|----------------------|
| 5644 | DWCEG 1 | 13 | 2012-Fa | H- (59 P ppm) | L (37 K ppm) | A&L Mill | 6.2 | | |
| 5644 | DWCEG 2 | 12 | 2012-Fa | M (33 P ppm) | H- (126 K ppm) | A&L Mill | 6.2 | | |
| 5644 | DWCEG 3 | 5 | 2012-Fa | M- (28 P ppm) | M+ (1110 K ppm) | A&L Mill | 6.1 | | |
| 5644 | DWCEG 4 | 9 | 2012-Fa | H (91 P ppm) | M- (60 K ppm) | A&L Mill | 5.9 | | |
| 5644 | DWCEG 5 | 16 | 2012-Fa | H- (59 P ppm) | VH (226 K ppm) | A&L Mill | 6.2 | | |
| 5644 | DWCEG 6 | 21 | 2012-Fa | M (37 P ppm) | M (77 K ppm) | A&L Mill | 5.9 | | |
| 5644 | DWCEG 7 | 13 | 2012-Fa | L+ (19 P ppm) | M+ (1114 K ppm) | A&L Mill | 5.6 | | |

Field Productivities for Major Crops

| Tract Name | Tract/ Field | Field Name | Acres | Predominant Soil Series | Corn | Small Grain | Alfalfa | Grass Hay | Environmental Warnings |
|------------|------------------|------------|-------|----------------------------|------|----------------|---------|--------------|------------------------|
| 5644 | 5644/0 | DWCEG 1 | 13 | Appling | IVa | II | III | III | High Slope |
| | 5644/6,8 | DWCEG 2 | 12 | Cecil | IVa | II | III | II | |
| | 5644/4,17 | DWCEG 3* | 5 | Cecil | IVa | II | III | II | |
| | 5644/5 | DWCEG 4 | 9 | Cecil | IVa | II | III | II | |
| | 5644/20,2 3 | DWCEG 5 | 16 | Appling | IVa | II | III | III | |
| | 5644/1,2, 3,1 | DWCEG 6 | 21 | Cecil | IVa | II | III | II | |
| | 5644/16 | DWCEG 7 | 13 | Appling | IVa | II | III | III | |

* Do not apply manure or biosolids more than 30 days prior to planting. Apply commercial fertilizer nitrogen to row crops in split spring applicaions.

Yield Range

| Field Productivity Group | Corn Grain Bu/Acre | Barley/Intensive Wheat Bu/Acre | Std. Wheat Bu/Acre | Alfalfa Tons/Acre | Grass/Hay Tons/Acre |
|--------------------------------|-----------------------|-----------------------------------|-----------------------|----------------------|------------------------|
| I | ≥170 | ≥80 | >64 | ≥6 | ≥4.0 |
| II | 150-170 | 70-80 | 56-64 | 4-6 | 3.5-4.0 |
| III | 130-150 | 60-70 | 48-56 | <4 | 3.0-3.5 |
| IV | 100-130 | 50-60 | 40-48 | NA | ≤3.0 |
| V | ≤100 | ≤50 | ≤40 | NA | NA |

Farm Summary Report

Plan: **New Plan** **Spring, 2013 - Summer, 2014**

Farm Name: **Charles E. Gregory**
Location: Dinwiddie
Specialist: Recyc Systems, Inc.
N-based Acres: 88.5
P-based Acres: 0.0

Tract Name: **5644**
FSA Number: 5644
Location: Dinwiddie

Field Name: **DWCEG 1**
Total Acres: 13.10 Usable Acres: 13.10
FSA Number: 0
Tract: 5644
Location: Dinwiddie
Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:
Pasture (>75% cover)

P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

| | | | | | |
|---------|-----|--------------|-------------|----------|-----|
| DATE | PH | P | K | | Lab |
| Fa-2012 | 6.2 | H-(59 P ppm) | L(37 K ppm) | A&L MIII | |

Soils:

| PERCENT | SYMBOL | SOIL SERIES |
|---------|--------|-------------|
|---------|--------|-------------|

| | | |
|----|----|---------|
| 54 | 2B | Appling |
| 46 | 2C | Appling |

Field Warnings:

Crop Rotation:

| PLANTED | YIELD | CROP NAME |
|---------|----------|--------------------------------------|
| 2013-Sp | 2.5 tons | Fescue grass (hay), maint. - No Till |

Field Name: DWCEG 2

| | | | |
|--------------|-----------|-------------------|-------|
| Total Acres: | 11.70 | Usable Acres: | 11.70 |
| FSA Number: | 6,8 | | |
| Tract: | 5644 | | |
| Location: | Dinwiddie | | |
| Slope Class: | C | Hydrologic Group: | B |

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

| DATE | PH | P | K | | Lab |
|---------|-----|-------------|---------------|----------|-----|
| Fa-2012 | 6.2 | M(33 P ppm) | H-(126 K ppm) | A&L MIII | |

Soils:

| PERCENT | SYMBOL | SOIL SERIES |
|---------|-----------------|-------------|
| 2 2 | 2B AppliAppling | |
| 37 4 | 4B CeciCecil | |
| 61 4 | 4C CeciCecil | |

Field Warnings:

Crop Rotation:

| | | |
|---------|--------------|---|
| PLANTED | YIELD | CROP NAME |
| 2013-Sp | 1.3 acres/AU | Orchard grass/fescue pastures<=25% legume, maint. - No Till |

Field Name: DWCEG 3

| | | | |
|--------------|-----------|-------------------|------|
| Total Acres: | 5.20 | Usable Acres: | 5.20 |
| FSA Number: | 4,17 | | |
| Tract: | 5644 | | |
| Location: | Dinwiddie | | |
| Slope Class: | C | Hydrologic Group: | B |

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

| | | | | | |
|---------|-----|--------------|---------------|----------|-----|
| DATE | PH | P | K | | Lab |
| Fa-2012 | 6.1 | M-(28 P ppm) | M+(110 K ppm) | A&L MIII | |

Soils:

| PERCENT | SYMBOL | SOIL SERIES |
|---------|--------|-------------|
| 42 | 4B | Cecil |
| 3 | 4C | Cecil |
| 55 | 4D | Cecil |

Field Warnings:*Environmentally Sensitive Soils due to:**Soils with perent slope in excess of 15%***Crop Rotation:**

PLANTED YIELD CROP NAME
2013-Sp 3.3 * tons Fescue grass (hay), maint. - No Till

Field Name: DWCEG 4

Total Acres: 8.80 Usable Acres: 8.80

FSA Number: 5

Tract: 5644

Location: Dinwiddie

Slope Class: B Hydrologic Group: B

Riparian buffer width: 0 ft

Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

| DATE | PH | P | K | | Lab |
|---------|-----|-------------|--------------|----------|-----|
| Fa-2012 | 5.9 | H(91 P ppm) | M-(60 K ppm) | A&L MIII | |

Soils:

| PERCENT | SYMBOL | SOIL SERIES |
|---------|--------|-------------|
| 3 | 2B | Appling |
| 22 | 2C | Appling |
| 75 | 4B | Cecil |

Field Warnings:

Crop Rotation:

PLANTED YIELD CROP NAME
2013-Sp 3.3 * tons Fescue grass (hay), maint. - No Till

Field Name: DWCEG 5

Total Acres: 15.50 Usable Acres: 15.50

FSA Number: 20,23
Tract: 5644
Location: Dinwiddie
Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

| DATE | PH | P | K | | Lab |
|---------|-----|--------------|---------------|----------|-----|
| Fa-2012 | 6.2 | H-(59 P ppm) | VH(226 K ppm) | A&L MIII | |

Soils:

| PERCENT | SYMBOL | SOIL SERIES |
|---------|--------|-------------|
| 69 | 2C | Appling |
| 31 | 4B | Cecil |

Field Warnings:

Crop Rotation:

| PLANTED | YIELD | CROP NAME |
|---------|------------|--------------------------------------|
| 2013-Sp | 2.8 * tons | Fescue grass (hay), maint. - No Till |

Field Name: DWCEG 6

Total Acres: 21.30 Usable Acres: 21.30
FSA Number: 1,2,3,15
Tract: 5644
Location: Dinwiddie
Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

| DATE | PH | P | K | | Lab |
|---------|-----|-------------|-------------|----------|-----|
| Fa-2012 | 5.9 | M(37 P ppm) | M(77 K ppm) | A&L MIII | |

Soils:

| PERCENT | SYMBOL | SOIL SERIES |
|---------|--------|-------------|
| 45 | 4B | Cecil |
| 43 | 4C | Cecil |
| 12 | 4D | Cecil |

Field Warnings:

Crop Rotation:

| PLANTED | YIELD | CROP NAME |
|---------|----------------|---|
| 2013-Sp | 1.3 * acres/AU | Orchard grass/fescue pastures<=25% legume, maint. - No Till |

Field Name: DWCEG 7

Total Acres: 12.90 Usable Acres: 12.90

FSA Number: 16

Tract: 5644

Location: Dinwiddie

Slope Class: C Hydrologic Group: B

Riparian buffer width: 0 ft
Distance to stream: 0 ft

Conservation Practices:

Pasture (>75% cover)

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

| | | | | | |
|---------|-----|--------------|---------------|----------|-----|
| DATE | PH | P | K | | Lab |
| Fa-2012 | 5.6 | L+(19 P ppm) | M+(114 K ppm) | A&L MIII | |

Soils:

| | | |
|---------|--------|-------------|
| PERCENT | SYMBOL | SOIL SERIES |
| 58 | 2C | Appling |
| 42 | 4B | Cecil |

Field Warnings:

Crop Rotation:

| | | |
|---------|------------|--------------------------------------|
| PLANTED | YIELD | CROP NAME |
| 2013-Sp | 2.9 * tons | Fescue grass (hay), maint. - No Till |



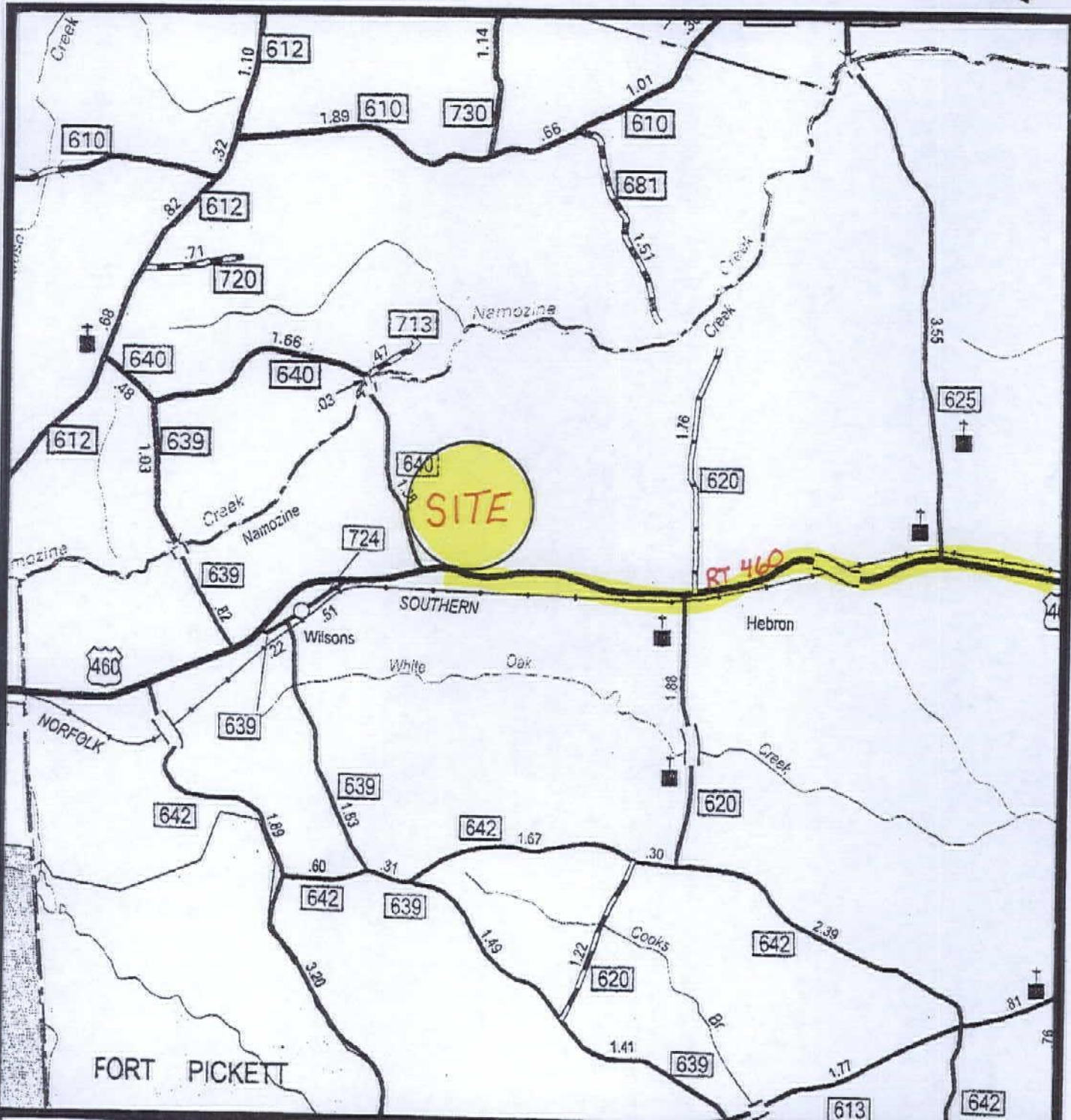
MAPS



N
A

Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 1 mile

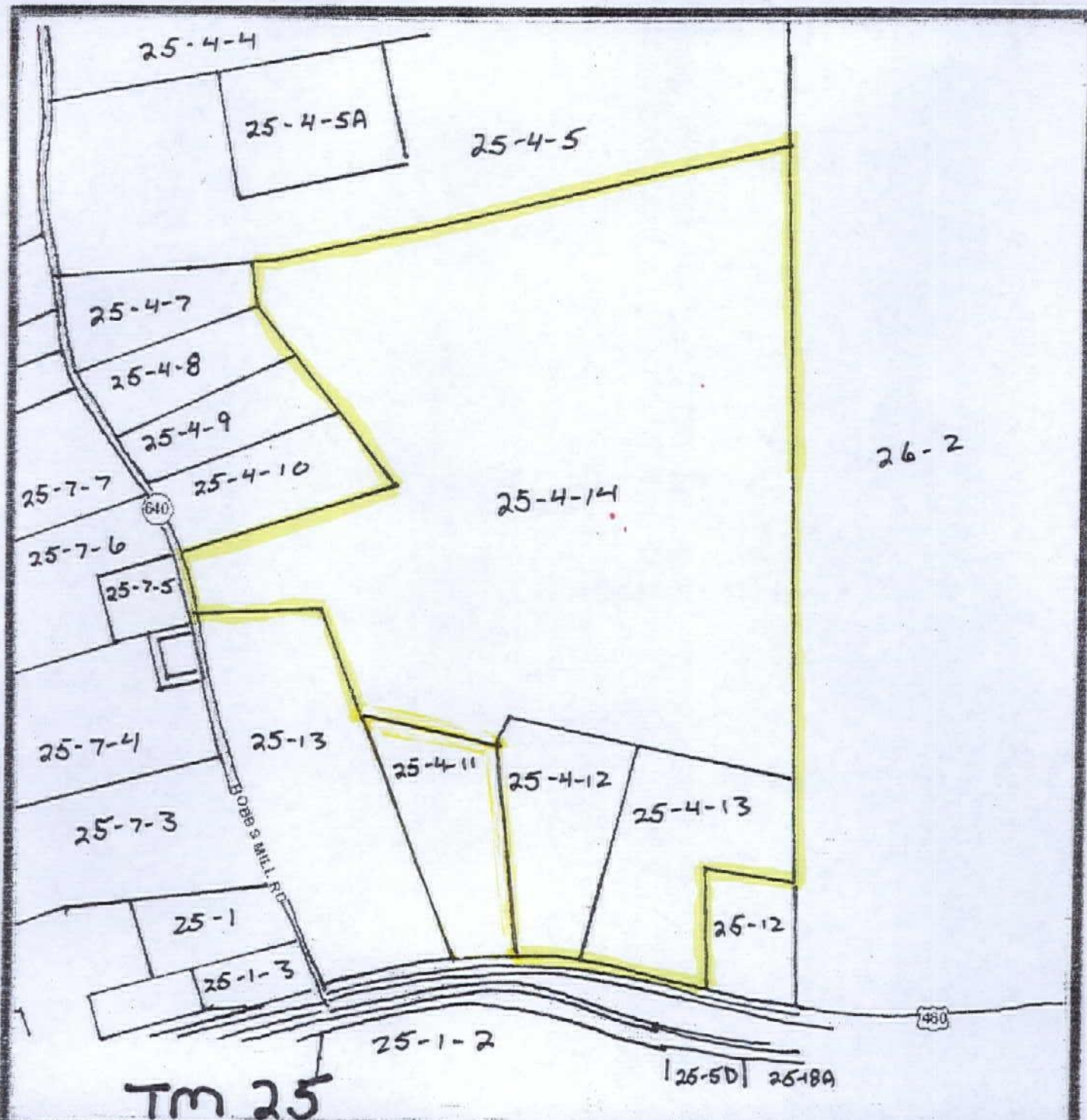
DWCEG 1-7

VICINITY MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

DWCEG 1-7

TAX MAP



ADJOINING LANDOWNERS

Charles E. Gregory

DINWIDDIE COUNTY

| Tax Map | Parcel # | Owner Name(s) |
|---------|----------|---|
| 25 | 12 | Gaynor C.& Geneva A. Shepherd |
| | 13 | Richard N. & Jo Diane Lippard Galbreath |
| 25-1 | 2 | Floyd A., Jr. & Rebecca P. Hudson |
| 25-4 | 5 | Jeanne H. Branch |
| | 7 | Jeanne H. Branch |
| | 8 | Jeanne H. Branch |
| | 9 | Robert D. & Willadean C. Harrison |
| | 10 | Robert D. & Willadean C. Harrison |
| | 11 | Joyce Nelms |
| 25-5 | D | Floyd A., Jr. & Rebecca P. Hudson |
| 25-7 | 5 | Bruce L. Clark |
| | 6 | Xuan or Carol Nguyen |
| 26 | 2 | Hobbs-Lewis LLC |

Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

DWCEG 1

SOIL MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

DWCEG 2-7

SOIL MAP





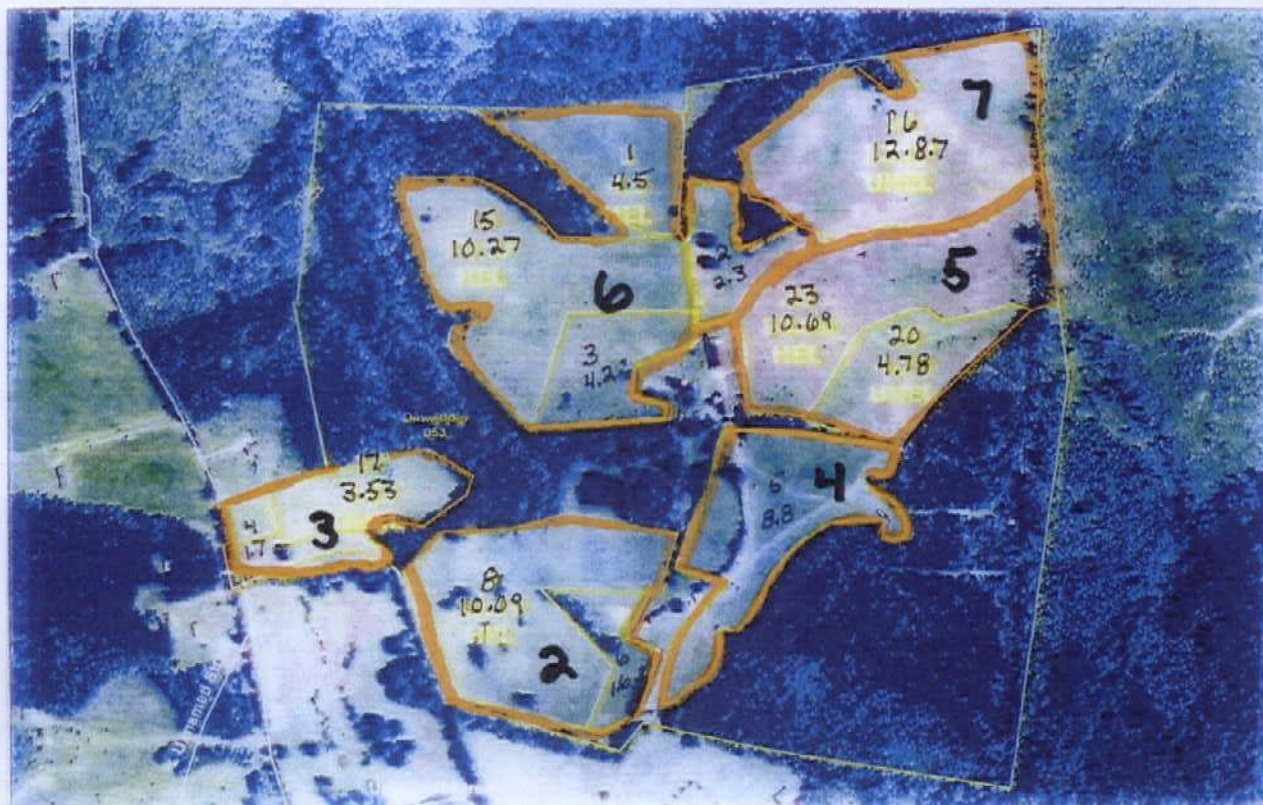
T5644B

Scale: 1 inch = 660 feet

DWCEG 1

AERIAL MAP





T5644

Scale: 1 inch = 660 feet

DWCEG 2-7

AERIAL MAP



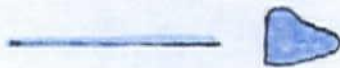
Legend for Site Plan



House and Well/Public Building



Well/Spring



Perennial Streams & Surface



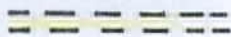
Wet Spot



Intermittent Stream/Drainage



Trees and Woods



Private Drive



Rock/Rocky Area



Sinkhole



Severely Eroded Spot



State Road



Field Boundary



Fence



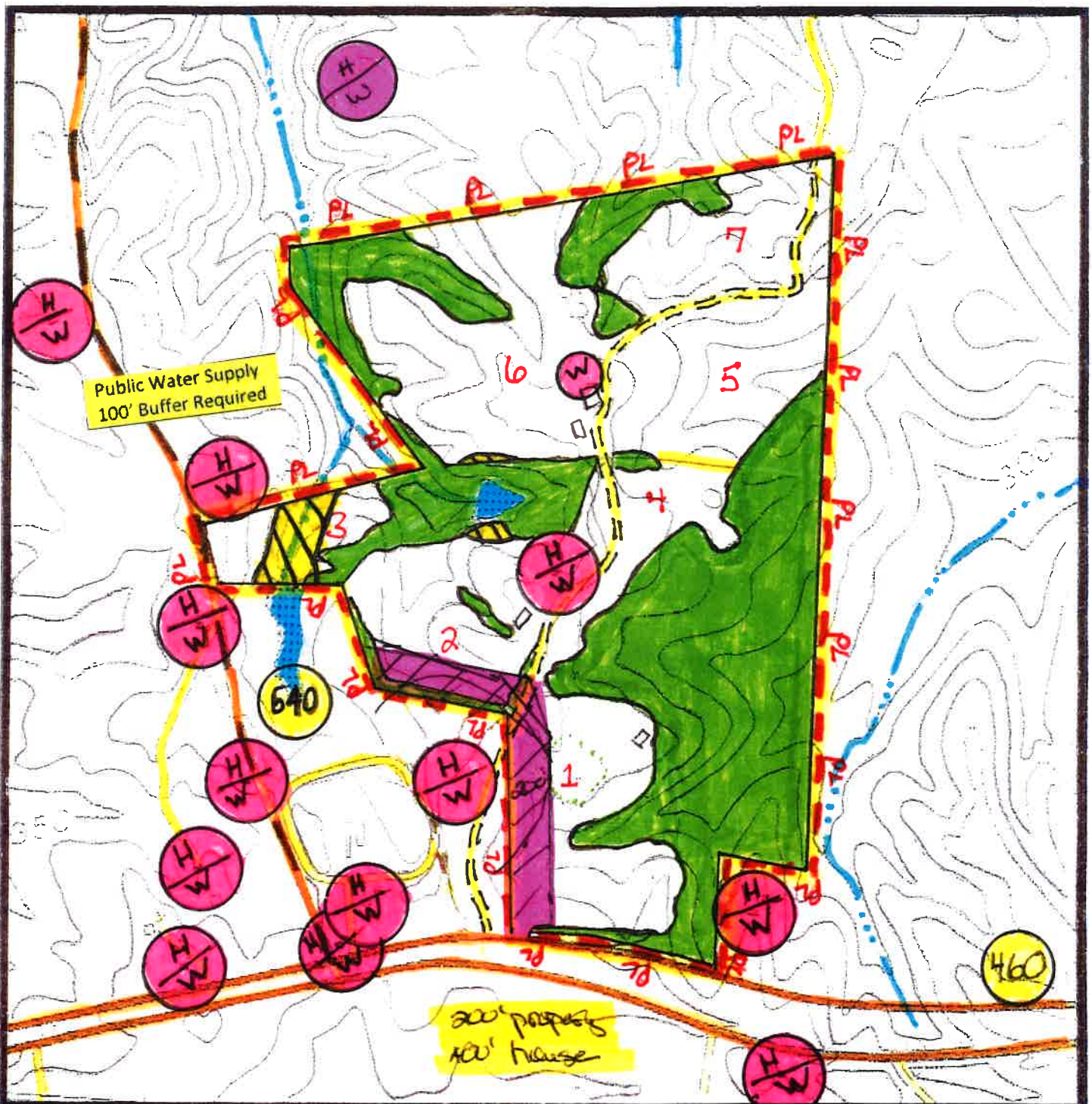
Property Line



Slope



Frequent Flooding



Scale: 1 inch = 660 feet

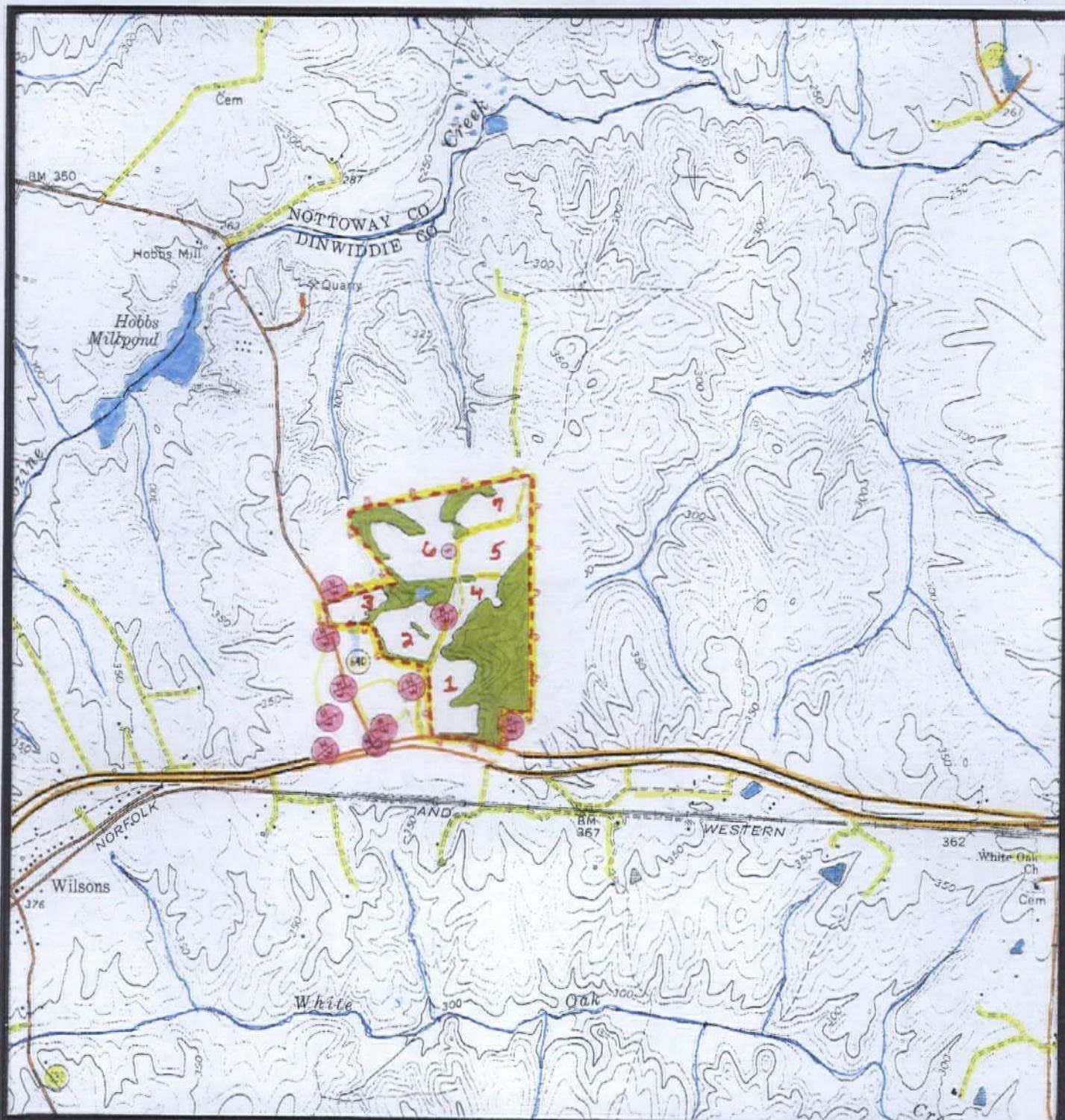
DWCEG 1-7

SITE PLAN



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 2,000 feet

DWCEG 1-7

TOPOGRAPHIC MAP

